CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.10/KRIDL/CEMENT/2014-15

Date: 06.10.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division BBMP, Bangalore.
AGENCY	:	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	:	Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	:	EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	Standard Consistency	IS-4031 (Part -4)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	490 Minutes	Not More than 600 Minutes
3	Soundness by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

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Job No.: CTCE/BBMP/WNo.10/KRIDL/SAND/2014-15 : 06.10.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014

Date of Testing : 06.10.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	94	4.70	4.70	95.3	90-100
2.36	263	13.15	17.85	82.2	75-100
1.18	492	24.60	42.45	57.6	55-90
600 Micron	389	19.45	61.90	38.1	35-59
300 Micron	478	23.90	85.80	14.2	8-30
150 Micron	159	7.95	93.75	6.2	0-10

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Job No.: CTCE/BBMP/WNo.10/KRIDL/AGG/2014-15 : 06.10.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014

Date of Testing : 06.10.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25400**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	962	3.79	3.79	96.21	95-100
20	16387	64.52	68.30	31.70	30-70
10	4998	19.68	87.98	12.02	10-35
4.75	2554	10.06	98.04	1.96	0-5

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Job No.: CTCE/BBMP/WNo.10/KRIDL/STEEL/2014-15 09.10.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	:	Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014
Date of Test	:	09.10.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	511	554	13.05	O.K	O.K

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Job No.: CTCE/BBMP/WNo.10/KRIDL/STEEL/2014-15 09.10.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	:	Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014
Date of Test	:	09.10.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	514	557	13.20	O.K	O.K

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Job No.: CTCE/BBMP/WNo.10/KRIDL/CUBE/2014-15 12.11.2014

TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of the work : Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014

Sample ID : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.10.2014	12.11.2014	8.131	475.8	21.15
2	15.10.2014	12.11.2014	8.215	510.4	22.68
3	15.10.2014	12.11.2014	8.325	492.6	21.89

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TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of the work : Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014

Sample ID : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	17.10.2014	14.11.2014	8.125	479.5	21.31
2	17.10.2014	14.11.2014	8.364	515.6	22.92
3	17.10.2014	14.11.2014	8.279	491.4	21.84

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Job No.: CTCE/BBMP/WNo.10/KRIDL/CUBE/2014-15 18.11.2014

TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of the work : Improvements to cross roads and drains at Nanjappa Layout 1st Stage in Ward No. 10 (Doddabommasandra) Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014

Sample ID : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.10.2014	18.11.2014	8.256	486.2	21.61
2	21.10.2014	18.11.2014	8.347	499.8	22.21
3	21.10.2014	18.11.2014	8.196	473.5	21.04

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TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

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Reference : EE/BTP/KRIDL/WO/634/2013-14 Dated: 05.03.2014

Sample ID : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.10.2014	22.11.2014	8.252	482.5	21.44
2	25.10.2014	22.11.2014	8.346	502.4	22.33
3	25.10.2014	22.11.2014	8.359	514.3	22.86

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